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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,445	07/20/2001	Charles Evert Prael	214.1001.01	2751

22883 7590 08/12/2005
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EXAMINER

VO, LILIAN

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,445

Applicant(s)

PRAEL ET AL.

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 18, 20 - 27 and 29 - 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 18, 20 - 27 and 29 - 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 18, 20 – 27 and 29 - 30 are pending. Claims 19 and 28 have been cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3, 5 - 7, 10 – 12, 14 - 16, 20 – 22, 24, 25 and 29 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248, hereinafter Wood) in view of Bhatti et al (EP 1 172 738 A2, hereinafter Bhatti) and further in view of applicant's admitted prior art (hereinafter AAPA).

4. Regarding **claim 1**, Wood discloses a method of doing business including the steps of:

receiving at least one job to be processed from at least one customer (page 1, paragraphs 6 and 7, page 4, paragraph 38);

estimating a time for completion of processing for said at least one job to be processed (page 4, paragraphs 35 - 36: expected termination time of a particular running job. Page 6, paragraphs 46);

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placing each of said at least one job to be processed in a queue of jobs to be processed (page 1, paragraphs 4 and 7);

sorting said queue of jobs to be processed (page 1, paragraphs 7);

configuring dynamically the size of at least one cluster of processing resource from a pool of processing resources responsive to at least one attribute of said job to be processed (abstract, page 1, paragraph 29: a job may run on more than one node at a time. When the job runs, the number of nodes it requires is allocated to the job which is then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job);

processing said at least one job to be processed from said queue of jobs to be processed by assigning said at least one job to be processed to said at least one cluster of processing resources (page 1, paragraph 7).

Wood did not clearly disclose the steps of querying the customer for information exchange to the service system about accepting a tolerance time that includes a time for completion later than the estimated time, making a result of the processing of the job to be processed available to the customer and configuring responsive to the result of querying. However, the concept of sending back to customer the result of the processed job is considered well know in the art and would also have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate to Wood's system to provide the result of the processing to the customer to fulfill the transaction request. Additionally, the step of querying the customer from the service system for information exchange and/or conducting ecommerce is considered well known in the art as disclosed in AAPA (specification page 15, lines 7 – 9). Woods discloses that when the

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job runs, the number of nodes it requires is allocated to the job for the job usage (page 1, paragraph 29). It would have been obvious for one of an ordinary skill in the art, to configure the system according to the result of the information exchange between the system and the user to perform the service as required. Furthermore, Bhatti discloses the tolerance time includes a time for completion acceptable to the customer that is later than the estimated time (abstract, col. 9, lines 45 – 49: allowable processing deadline specifies the allowable time period within which the user request must be serviced). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to combine Bhatti's teaching together with Wood and AAPA to maintain quality of service by providing service to customer within the acceptable time frame.

5. Regarding **claim 2**, Wood discloses the receiving further includes at least one attribute specific to the job to be processed including at least one of the following attributes: 1) priority of processing, 2) type of processing.

6. Regarding **claim 3**, Wood discloses jobs to be processed include consideration of the request for priority of processing (page 1, paragraph 7).

7. Regarding **claim 5**, as modified Wood discloses sorting the jobs queue includes the considering tolerance time attribute of the jobs (Bhatti: abstract and col. 9, lines 45 – 49: each user requests have an allowable processing deadline based on the corresponding user tolerance threshold of the use requests).

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8. Regarding **claim 6**, Wood and AAPA did not clearly disclose the step of confirming the time for completion of processing with the customer. Nevertheless, Bhatti discloses each user requests have an allowable processing deadline based on the corresponding user tolerance threshold of the use requests and that the processing deadline specifies the time period within which the particular user request must be serviced (abstract and col. 9, lines 45 – 49). Furthermore, Bhatti discloses that the system has knowledge of human behavior and expectation which can act accordingly to users' subjective expectation of the performance (col. 2, lines 48 – 54). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to recognize that Bhatti's system comprises the step of confirming the request processing completion time with the customer by providing the service accordingly to the users' subjective expectation. It would also have been obvious for an ordinary skill to combine Bhatti's teaching with Wood and AAPA so that quality of service can be achieved by providing service to customers according to their expectation.

9. Regarding **claim 7**, Wood discloses the step of configuring dynamically a pool of processing resources into at least one cluster of processing resources responsive to at least one attribute of said at least one job to be processed further includes the steps of:

saving said cluster of processing resources from said pool of processing resources as they become available such that they are earmarked for creating a specific cluster to be used for processing said at least one job to be processed (page 1, paragraph 8: marking for dedication to the job as many conforming free nodes in the earliest available time range as required by the job. Page 6, paragraph 47);

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saving a configuration file on said cluster of processing resources (page 3, paragraph 29: a job may run on more than one node at a time. When the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage); and

rebooting said cluster of processing resources to configure dynamically said cluster of processing resources for processing of said at least one job to be processed (page 3, paragraph 29: When the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job).

10. **Claims 10 – 12 and 14 – 16** are rejected on the same ground as stated in claims 1 – 3 and 5 - 7 above.

11. Regarding **claim 20**, Wood discloses a system including:

a request receiver element configured to receive at least one job to be processed from at least one customer, said request receiver element in communication with a pool of processing resources (page 1, paragraph 7: receiving a plurality of jobs to be scheduled for executing on the sub-pool nodes set);

a queue of jobs to be processed and disposed to being sorted according to a priority assigned to each of said at least one job to be processed, said queue of jobs to be processed being in communication with said pool of processing resources (page 1, paragraph 7: ordering the receiving jobs by job priority and schedule for executing on the sub-pool nodes set); and

a pool of processing resources configured to run at least one job to be processed, said pool of processing resources and disposed to being dynamically divided into clusters of processing resources (abstract, page 1, paragraph 29: a job may run on more than one node at a time. When the job runs, the number of nodes it requires is allocated to the job which is then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job).

Wood however did not clearly disclose the step of running the clusters in parallel. Instead, Wood discloses the step of scheduling jobs on parallel computer systems (page 1, paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the invention was made to implement Wood's system with the feature of running clusters in parallel to fully utilize all the system resource in an efficient manner. Also Wood did not clearly disclose the steps of querying the customer for information exchange to the service system about accepting a tolerance time that includes a time for completion later than the estimated time and sorting the jobs queue in responsive to the result of querying. However, the step of querying the customer from the service system for information exchange and/or conducting ecommerce is considered well known in the art as disclosed in AAPA (specification page 15, lines 7 – 9). Woods discloses the step of ordering the receiving jobs by job priority and schedule for executing on the sub-pool nodes set (page 1, paragraph 7). It would have been obvious for one of an ordinary skill in the art, to sort the jobs in the queue according to the result of the information exchange between the system and the user to perform the service as required. Furthermore, Bhatti discloses the tolerance time includes a time for completion acceptable to the customer that is later than the estimated time (abstract, col. 9, lines 45 – 49: allowable processing deadline specifies

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the allowable time period within which the user request must be serviced). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to combine Bhatti's teaching together with Wood and AAPA to maintain quality of service by providing service to customer within the acceptable time frame.

12. **Claims 21 – 22 and 24** are rejected on the same ground as stated in claims 2 – 3 and 5 above.

13. Regarding **claim 25**, Wood disclose the pool of processing resources are disposed to being dynamically divided into clusters of processing resources is responsive to at least one attribute of the job to be processed (abstract, page 1, paragraph 29: a job may run on more than one node at a time. When the job runs, the number of nodes it requires is allocated to the job which is then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job) and further include:

a procuring element disposed to collect processing resources from said pool of processing resources as they become available such that they are earmarked for creating a specific cluster to be used for processing said at least one job to be processed (page 1, paragraph 8: marking for dedication to the job as many conforming free nodes in the earliest available time range as required by the job. Page 6, paragraph 47);

an initializing element disposed to save a configuration file on said cluster of processing resources (page 3, paragraph 29: a job may run on more than one node at a

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time. When the job runs, the number of nodes it requires is allocated to the job which is then available for the job's usage);

a rebooting element disposed to soft reboot said cluster of processing resources such that said cluster of processing resources is dynamically created (page 3, paragraph 29: When the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job);

an executing element configured to run said at least one job to be processed on said cluster of processing resources (page 1, paragraph 7: executing the jobs).

Wood did not clearly disclose the step of making a result of the processing of the job to be processed available to the customer. However, the concept of sending back to customer the result of the processed job is considered well know in the art and would also have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate to Wood's system to provide the result of the processing to the customer to fulfill the transaction request.

14. Regarding **claim 29**, as modified Woods discloses the step of configuring dynamically the size of at least one cluster of processing resources further comprises soft rebooting the cluster of processing resources (Woods, page 3, paragraph 29: When the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage. Paragraph 30: Nodes with sufficient capacity for the requirements of a job can be allocated to the job). It is obvious for one of an ordinary skill in the art, that

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the system perform soft rebooting step when the system dynamically reconfigured by allocating the necessary resources to process a particular job.

15. **Claim 30** is rejected on the same ground as stated in claim 29 above.

16. Claims 4, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248) in view of Bhatti et al (EP 1 172 738 A2) and in view of AAPA, as applied to claims 1, 10 and 20 above, and further in view of Shimada (US 6,690,649).

17. Regarding **claim 4**, as modified Wood did not clearly disclose the step of querying includes offering a fee discount to the customer for the tolerance time. Nevertheless, the concept of offering a discount fee for a lower quality of service such as for the tolerance time that is later than the estimated time is considered well known as disclosed by Shimada in which the customer is provided for service at a lower cost with delay (col. 2, lines 19 – 29). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to combine Shimada's teaching together with modified Wood to offer a fee to customers according to the acceptable level of quality of service per their requests.

18. **Claims 13 and 23** are rejected on the same ground as stated in claim 4 above.

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19. Claim 8 – 9, 17 – 18 and 26 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al. (US Pat. Application Publication 2002/0194248, hereinafter Wood) in view of Bhatti et al (EP 1 172 738 A2) and in view of AAPA, as applied to claims 1, 10 and 20 above and further in view of Abrams (US Pat. Application Publication 2004/0193517).

20. Regarding **claim 8**, as modified Wood did not clearly disclose the result of the job includes charging the fee. Nevertheless, the concept of charging a fee for performing a job is considered well known in the art and additionally discloses by Abrams in which the amount of time spent on a particular job is charged to the customer (page 1, paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the invention was made to incorporate this concept to modified Wood to charge the customer for executing the jobs and/or providing the service.

21. Regarding **claim 9**, as modified Wood did not clearly disclose the additional limitation as claimed. Nevertheless, the concept of charging a fee based on the time perform a job is considered well known in the art and additionally discloses by Abrams in which the amount of time spent on a particular job is charged to the customer (page 1, paragraph 4). It would have been obvious for one ordinary skill in the art, at the time the invention was made to incorporate this concept to modified Wood to charge the customer for executing the jobs and/or providing the service.

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22. **Claims 17 – 18 and 26 – 27** are rejected on the same ground as stated in claims 8 – 9 above.

Response to Arguments

23. Applicant's arguments with respect to claims 1, 4, 9, 13, 24 and 29 have been considered but are moot in view of the new ground(s) of rejection.

24. With respect to applicant's remarks that Bhatti is not concerned with cluster processing (page 14, last paragraph), the cluster processing is disclosed in Wood. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

25. Regarding applicant's remark that applicant does not see anything in either Wood or Bhatti that suggests application of handling web server latency to cluster processing (page 15, 1st paragraph), applicant is arguing a feature of the invention not specifically stated in the claim language, which is improper. Claim subject matter, not the specification, is the measure of invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art. *In re Self*, 213 USPQ 1,5 (CCPA 1982); *In re Priest*, 199 USPQ 11,15 (CCPA 1978).

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26. In response to applicant's argument (page 15, last paragraph, page 16, 1st paragraph, last sentence) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., soft rebooting is to provide separation between subsequent jobs) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

27. Regarding applicant's remarks that the references do not suggest or discuss soft rebooting of a cluster of processing resources (page 16, 2nd paragraph), the examiner disagrees. Applicant is directed to Woods, page 3, paragraph 29 which discloses that when the job runs, the number of nodes it requires are allocated to the job which are then available for the job's usage. Also paragraph 30 discloses that nodes with sufficient capacity for the requirements of a job can be allocated to the job. In other words, it is obvious to one of an ordinary skill in the art the system perform soft rebooting step when the system dynamically reconfigured by allocating the necessary resources to process a particular job. The term "reboot" has been interpreted by the office as reconfiguring. Thus, in this case, the reference discloses the step of dynamically reconfiguring by allocating the resources according to a particular job requirement, which read on the term soft reboot in the claim.

With respect to applicant's remark that the term "reboot" or the like does not appear in either of these references (page 16, 2nd paragraph), applicant's specification page 4, lines 15 – 19 states that soft rebooted defines the cluster by dynamically

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reconfigured the identified/required nodes to perform the job. Therefore, the similar concept is disclosed from the references, which is read on the claim.

Conclusion

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2195

lv
August 3, 2005


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